

WHAT IS CLAIMED IS:

- 1 1. An inkjet printhead, comprising:
- 2 a base plate provided with a plurality of chambers to be filled with ink;
- 3 a nozzle plate installed on the base plate and provided with orifices communicating with the
- 4 respective chambers;
- 5 a plurality of heaters for generating heat when respective currents are independently applied,
- 6 and heating the ink in the respective chambers so that ink bubbles can be generated to eject
- 7 respective ink droplets through the respective orifices; and
- 8 a plurality of ink inlet passages for supplying ink from an ink reservoir to the respective
- 9 chambers, wherein a plurality of grooves are formed at an inner wall of each of the ink inlet
- 10 passages.
- 11 2. The inkjet printhead as claimed in claim 1, wherein the ink inlet passages are formed in
- 12 the base plate.
- 13 3. The inkjet printhead as claimed in claim 1, wherein each of the heaters is installed on the
- 14 outer side of the nozzle plate to heat the ink in the corresponding chamber indirectly via said nozzle
- 15 plate by conduction.
- 16 4. The printhead of claim 1, each one of said plurality of chambers being hemispherical.

1 5. The printhead of claim 1, each of said plurality of ink inlet passages extends through said
2 base plate.

1 6. The printhead of claim 4, each one of said plurality of ink inlet passages extend through
2 said base plate to a bottom of a respective one of said plurality of hemispherical chambers.

1 7. An inkjet printhead, comprising:
2 a substrate provided with a plurality of chambers to be filled with ink;
3 a nozzle plate installed on top of the substrate and provided with orifices communicating with
4 the respective chambers;

5 a plurality of heaters for generating heat when respective currents are independently applied,
6 and heating the ink in the respective chambers so that ink bubbles can be generated to eject
7 respective ink droplets through the respective orifices; and

8 a plurality of ink inlet passages extending through said substrate from bottoms of respective
9 ones of said plurality of chambers for supplying ink from an ink reservoir to the respective chambers,
10 wherein a plurality of grooves are formed at an inner wall of each of the ink inlet passages.

1 8. The printhead of claim 7, each of said plurality of chambers being hemispherical and
2 being disposed at said top of said substrate, each of said plurality of ink inlet passages extending
3 from bottoms of respective ones of said plurality of hemispherical ink chambers.

1 9. The printhead of claim 8, wherein each one of said plurality of heaters having a donut
2 shape and encircling said orifices.

1 10. The printhead of claim 9, wherein said plurality of heaters are disposed on an underside
of said nozzle plate and facing respective ones of said plurality of chambers.

1 11. The printhead of claim 9, wherein said plurality of heaters being disposed on a top side
of said nozzle plate facing away from respective ones of said plurality of ink chambers and applying
heat to ink in respective ones of said ink chambers by conduction of heat through said nozzle plate
to said ink in said ink chambers.

12. An inkjet printhead, comprising:

3 a base plate being perforated by a plurality of hour-glass structures, a top portion of said hour
glass portions being respective ones of a plurality of chambers to be filled with ink;

4 a nozzle plate installed on the base plate and perforated with a plurality of nozzle holes
5 communicating with the respective chambers;

6 a plurality of heaters for generating heat when respective currents are independently applied,
7 and heating the ink in the respective chambers so that ink bubbles can be generated to eject
8 respective ink droplets through the respective nozzle holes; and

9 a plurality of ink inlet passages for supplying ink from an ink reservoir to the respective

10 chambers, wherein a plurality of grooves are formed at an inner wall of each of the ink inlet
11 passages.

1 13. The printhead of claim 12, a bottom of said hour glass portions being a plurality of
2 funnels for drawing in ink to replenish respective ones of said ink chambers, said ink inlet passages
3 connecting respective ones of said funnels with respective ones of said ink chambers and forming
4 a middle portion of said hour-glass shaped perforations of said base plate.

14. The printhead of claim 12, each of said plurality of ink chambers being hemispherical
and forming a top portion of said hour-glass perforation of said base plate.

15. The printhead of claim 12, each one of said plurality of heaters having a donut shape and
encircling respective ones of said nozzle holes.

1 16. The printhead of claim 15, said plurality of heaters are disposed on an underside of said
2 nozzle plate and facing respective ones of said plurality of chambers.

1 17. The printhead of claim 15, said plurality of heaters being disposed on a top side of said
2 nozzle plate facing away from respective ones of said plurality of ink chambers and applying heat
3 to ink in respective ones of said ink chambers by conduction of heat through said nozzle plate to said
4 ink in said ink chambers.

1 18. The printhead of claim 13, each one of said plurality of heaters having a donut shape and
2 encircling respective ones of said nozzle holes.

1 19. The printhead of claim 18, said plurality of heaters are disposed on an underside of said
2 nozzle plate and facing respective ones of said plurality of chambers.

1 20. The printhead of claim 18, said plurality of heaters being disposed on a top side of said
2 nozzle plate facing away from respective ones of said plurality of ink chambers and applying heat
3 to ink in respective ones of said ink chambers by conduction of heat through said nozzle plate to said
4 ink in said ink chambers.

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